



ICTS

INTERNATIONAL
CENTRE *for*
THEORETICAL
SCIENCES

TATA INSTITUTE OF FUNDAMENTAL RESEARCH

ICTS Colloquium

Title : The incompressible 3D Euler equations: how much do we know?

Speaker : John D. Gibbon, Imperial College London, United Kingdom

Date : Monday, January 11, 2016

Time : 3:00 pm

Venue : Emmy Noether Seminar Room, ICTS Campus, Bangalore

Abstract : Research in both viscous and inviscid fluid dynamics has many schools which display widely contrasting methods and attitudes. Among those whose interest lies in proving mathematically rigorous results, two major open problems stand out: a) Do solutions of the incompressible 3D Euler equations develop a singularity in a finite time? and, b) Do solutions of the 3D incompressible Navier-Stokes equations remain regular for arbitrarily long times? This talk will present an overview of recent work on the former question but brief remarks will also be made on the latter, if time permits. Work on Euler spreads across many intellectual boundaries: attempts to prove rigorous results have been closely allied with numerical experiments which currently number at least 22.

Note: This Colloquium is part of the Airbus Day at ICTS

International Centre for Theoretical Sciences – TIFR

Transit Address: TIFR Centre Building, Indian
Institute of Science Campus,
Bengaluru 560 012, India

Permanent Address: Survey No. 151, Shivakote
Village, Hesaraghatta Hobli,
Bengaluru (North) 560089, India